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10/031,200	01/15/2002	Jiro Nakabayashi	1275-48	2637

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EXAMINER	
MATTIS, JASON E	

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2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/031,200	NAKABAYASHI, JIRO	
	Examiner	Art Unit	
	Jason E. Mattis	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Amendment filed 3/14/07. New claims 43-44 have been added. Claims 19-44 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 19, 20-22, 27-28, 31-34, 39-40 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pogrebinsky et al. (U.S. Publication US 2002/0101855 A1) in view of Haskell et al. (U.S. Pat. 5287182) and in further view of Ohlsson et al. (U.S. Pat. 6452950 B1).

With respect to claims 19 and 31, Pogrebinsky et al. discloses a packet processor including a recording medium holding a packet processing program **(See page 2 paragraphs 27 and 30 and Figure 4b of Pogrebinsky et al. for reference to an IP terminal 110, which is a packet processor processing data received via a network to reproduce the data, and for reference to the invention being embodied as software, which is a recording medium holding a program)**. Pogrebinsky et al.

also discloses a receiving buffer for storing received packets **(See page 2 paragraph 27 and Figure 4b of Pogrebinsky et al. for reference to jitter buffer 112, which is a buffer storing received packets)**. Pogrebinsky et al. further discloses a reproducing means **(See page 2 paragraph 27 and Figure 4b of Pogrebinsky et al. for reference to decompressor 116, which is a device that reproduces data of packets)**. Pogrebinsky et al. also discloses a control means to reproduce data without breaks **(See page 2 paragraph 27 and Figure 4b of Pogrebinsky et al. for reference to controller 120, which is a control means to control the reproduction of the data)**. Pogrebinsky et al. further discloses that the control means modifies the receiving buffer size when a result of monitoring packets shows an increase or decrease in the number of packets with time **(See page 4 paragraphs 55-56 of Pogrebinsky et al. for reference to increasing or decreasing the size of the jitter buffer based on monitored bursts of packets)**. Pogrebinsky et al. does not specifically disclose that the control means controls packets by their number, holds a reference value, starts data reproduction when the number of packets exceeds the reference value, and collects data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up. Pogrebinsky et al. also does not disclose modifying the reference value for the number of received packets at which reproduction of data is started when a result of monitoring packets shows an increase or decrease in the number of packets with time. Pogrebinsky et al. further does not disclose controlling packets stored in the receiving buffer by their number without using temporal information received with the packets.

With respect to claims 19 and 31, Haskell et al., in the field of communications, discloses a control means controlling packets by their number, holding a reference value, starting data reproduction when the number of packets exceeds the reference value, and collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up **(See column 5 line 47 to column 6 line 41 of Haskell et al. for reference using a jitter delay value, D_j, which is a reference value used to determine when to start reproduction of data packets and for reference to data being collected until the jitter delay value, D_j, has been reached)**. Haskell et al. also discloses modifying the reference value for the number of received packets at which reproduction of data is started when a result of monitoring packets shows an increase or decrease in the number of packets with time **(See column 5 line 47 to column 6 line 41 of Haskell et al. for reference to adjusting the jitter delay value, D_j, based on monitored data)**. Using a control means controlling packets by their number, holding a reference value, starting data reproduction when the number of packets exceeds the reference value, collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up and modifying the reference value has the advantage of allowing a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

It would have been obvious for one or ordinary skill in the art at the time of the invention, when presented with the work of Haskell et al., to combine using a control means controlling packets by their number, holding a reference value, starting data

reproduction when the number of packets exceeds the reference value, collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up and modifying the reference value, as suggested by Haskell et al., with the system and method of Pogrebinsky et al., with the motivation being allow a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

With respect to claims 19 and 31, Ohlsson et al., in the field of communications, discloses controlling packets stored in a receiving buffer by their number without using temporal information received with the packets **(See column 5 line 46 to column 6 line 18, column 8 line 11 to column 9 line 5, and Figures 3 and 5 of Ohlsson et al. for reference to controlling packet transmission of packet stored in a jitter buffer by determining a time to play packets based on an estimated jitter delay that is based on a receive time of the first packet without the use of any temporal information received within the packet itself and for reference to controlling further packet transmission using only the sequence number of the packets)**. Controlling packets stored in a receiving buffer by their number without using temporal information received with the packets has the advantage of simplifying the jitter control process by not relying on any time stamp data received with data packets.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ohlsson et al., to combine controlling packets stored in a receiving buffer by their number without using temporal information

received with the packets, as suggested by Ohlsson et al., with the system and method of Pogrebinsky and Haskell et al., with the motivation being to simplify the jitter control process by not relying on any time stamp data received with data packets.

With respect to claims 20 and 32, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 19 and 31 as shown above. The combination of Pogrebinsky et al. and Haskell et al. does not disclose discarding a fixed amount of data when data in the buffer exceeds a predetermined buffer size.

With respect to claims 20 and 32, Ohlsson et al., in the field of communications discloses discarding a fixed amount of data when data in a buffer exceeds a predetermined buffer size **(See column 6 line 37 to column 7 line 44 of Ohlsson et al. for reference to discarding packets when data in a buffer exceeds a size)**. Discarding a fixed amount of data when data in a buffer exceeds a predetermined buffer size has the advantage of allowing the problem of data overrun in a buffer to be overcome.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ohlsson et al., to combine discarding a fixed amount of data when data in a buffer exceeds a predetermined buffer size, as suggested by Ohlsson et al., with the system and method of Pogrebinsky and Haskell et al., with the motivation being to allow the problem of data overrun in a buffer to be overcome.

With respect to claims 21 and 33, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 19 and 31 as shown above. Pogrebinsky et al. does not disclose modifying the reference value when the data buffer is used up.

With respect to claims 21 and 33, Haskell et al., in the field of communications, discloses modifying a reference value when the data buffer is used up **(See column 5 line 47 to column 6 line 41 of Haskell et al. for reference to adjusting the jitter delay value, D_j, based on monitored data)**. Modifying a reference value when the data buffer is used up has the advantage of allowing a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

It would have been obvious for one or ordinary skill in the art at the time of the invention, when presented with the work of Haskell et al., to combine modifying a reference value when the data buffer is used up, as suggested by Haskell et al., with the system and method of Pogrebinsky et al., with the motivation being allow a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

With respect to claims 22 and 34, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 19 and 31 as shown above. Pogrebinsky et al. also discloses modifying the sized of the receiving buffer when data in the buffer exceeds a predetermined buffer size **(See page 4 paragraphs 55-56 of Pogrebinsky et al. for reference to increasing or decreasing**

the size of the jitter buffer based on monitored bursts of packets exceeding a threshold).

With respect to claims 27 and 39, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 21 and 33 as shown above. Pogrebinsky et al. does not disclose recording modifications over time and modifying the receiving buffer sized based on the records.

With respect to claims 27 and 39, Haskell et al., in the field of communications, discloses recording modifications over time and modifying the receiving buffer sized based on the records **(See column 5 line 47 to column 6 line 41 and Figure 4 of Haskell et al. for reference to adjusting the jitter delay value, D_j, based on monitored data over time)**. Recording modifications over time and modifying the receiving buffer sized based on the records has the advantage of allowing a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

It would have been obvious for one or ordinary skill in the art at the time of the invention, when presented with the work of Haskell et al., to combine recording modifications over time and modifying the receiving buffer sized based on the records, as suggested by Haskell et al., with the system and method of Pogrebinsky et al., with the motivation being allow a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

With respect to claims 28 and 40, Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 22 and 34 as shown above.

Pogrebinsky et al. does not disclose recording modifications over time and modifying the receiving buffer sized based on the records.

With respect to claims 28 and 40, Haskell et al., in the field of communications, discloses recording modifications over time and modifying the receiving buffer sized based on the records **(See column 5 line 47 to column 6 line 41 and Figure 4 of Haskell et al. for reference to adjusting the jitter delay value, D_j, based on monitored data over time)**. Recording modifications over time and modifying the receiving buffer sized based on the records has the advantage of allowing a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

It would have been obvious for one or ordinary skill in the art at the time of the invention, when presented with the work of Haskell et al., to combine recording modifications over time and modifying the receiving buffer sized based on the records, as suggested by Haskell et al., with the system and method of Pogrebinsky et al., with the motivation being allow a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

With respect to claims 43 and 44, Pogrebinsky et al. discloses a packet processor including a recording medium holding a packet processing program **(See page 2 paragraphs 27 and 30 and Figure 4b of Pogrebinsky et al. for reference to an IP terminal 110, which is a packet processor processing data received via a network to reproduce the data, and for reference to the invention being embodied as software, which is a recording medium holding a program)**. Pogrebinsky et al.

also discloses a receiving buffer for storing received packets **(See page 2 paragraph 27 and Figure 4b of Pogrebinsky et al. for reference to jitter buffer 112, which is a buffer storing received packets)**. Pogrebinsky et al. further discloses a controller modifying the receiving buffer size when a result of monitoring packets shows a non-jitter-induced increase or decrease in the number of packets with time **(See page 4 paragraphs 55-56 of Pogrebinsky et al. for reference to increasing or decreasing the size of the jitter buffer based on monitored bursts of packets)**. Pogrebinsky et al. does not specifically disclose that the control means controls packets by their number, holds a reference value, starts data reproduction when the number of packets exceeds the reference value, and collects data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up. Pogrebinsky et al. also does not disclose modifying the reference value for the number of received packets at which reproduction of data is started when a result of monitoring packets shows an increase or decrease in the number of packets with time. Pogrebinsky et al. further does not disclose controlling packets stored in the receiving buffer by their number without using temporal information received with the packets.

With respect to claims 43 and 44, Haskell et al., in the field of communications, discloses a control means controlling packets by their number, holding a reference value, starting data reproduction when the number of packets exceeds the reference value, and collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up **(See column 5 line 47 to column 6 line 41 of Haskell et al. for reference using a jitter delay value,**

D_j, which is a reference value used to determine when to start reproduction of data packets and for reference to data being collected until the jitter delay value, D_j, has been reached). Haskell et al. also discloses modifying the reference value for the number of received packets at which reproduction of data is started when a result of monitoring packets shows an increase or decrease in the number of packets with time **(See column 5 line 47 to column 6 line 41 of Haskell et al. for reference to adjusting the jitter delay value, D_j, based on monitored data)**. Using a control means controlling packets by their number, holding a reference value, starting data reproduction when the number of packets exceeds the reference value, collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up and modifying the reference value has the advantage of allowing a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

It would have been obvious for one or ordinary skill in the art at the time of the invention, when presented with the work of Haskell et al., to combine using a control means controlling packets by their number, holding a reference value, starting data reproduction when the number of packets exceeds the reference value, collecting data up to a level corresponding to the reference value before causing the reproduction of data when the data in the buffer is used up and modifying the reference value, as suggested by Haskell et al., with the system and method of Pogrebinsky et al., with the motivation being allow a processor to effectively control jitter while reducing the packet discard ratio of time dependent data streams.

With respect to claims 43 and 44, Ohlsson et al., in the field of communications, discloses controlling packets stored in a receiving buffer by their number without using temporal information received with the packets **(See column 5 line 46 to column 6 line 18, column 8 line 11 to column 9 line 5, and Figures 3 and 5 of Ohlsson et al. for reference to controlling packet transmission of packet stored in a jitter buffer by determining a time to play packets based on an estimated jitter delay that is based on a receive time of the first packet without the use of any temporal information received within the packet itself and for reference to controlling further packet transmission using only the sequence number of the packets)**. Controlling packets stored in a receiving buffer by their number without using temporal information received with the packets has the advantage of simplifying the jitter control process by not relying on any time stamp data received with data packets.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ohlsson et al., to combine controlling packets stored in a receiving buffer by their number without using temporal information received with the packets, as suggested by Ohlsson et al., with the system and method of Pogrebinsky and Haskell et al., with the motivation being to simplify the jitter control process by not relying on any time stamp data received with data packets.

4. Claims 23, 25-26, 29-30, 35, 37-38, and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pogrebinsky et al. in view of Haskell et al. and Ohlsson et al. as applied to claims 19, 20-22, 27-28, 31-34, 39-40 and 43-44 above, and further in view of Cloutier (U.S. Pat. 5966387).

With respect to claims 23 and 35, the combination Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 19 and 31 as shown above.

With respect to claims 24 and 36, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. disclose all the elements of claims 20 and 32 as shown above.

With respect to claims 25 and 37, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 21 and 33 as shown above.

With respect to claims 26 and 38, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 22 and 34 as shown above.

With respect to claims 29 and 41, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 27 and 39 as shown above.

With respect to claims 30 and 42, the combination of Pogrebinsky et al., Haskell et al., and Ohlsson et al. discloses all the elements of claims 28 and 40 as shown above.

With respect to claims 23-26, 29-30, 35-38, and 41-42, the combination of Pogrebinsky et al. and Haskell et al. does not disclose modifying a clock for data reproduction.

With respect to claims 23-26, 29-30, 35-38, and 41-42, Cloutier, in the field of communications, discloses modifying a clock for data reproduction **(See column 13 lines 41-57 of Cloutier for reference to changing an output clock signal to adjust for detected jitter)**. Modifying a clock for data reproduction has the advantage of allowing data output to be optimized to correspond with the rate at which data is received.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Cloutier, to combine modifying a clock for data reproduction, as suggested by Cloutier, with the system and method of Pogrebinsky and Haskell et al., with the motivation being to allow data output to be optimized to correspond with the rate at which data is received.

Response to Arguments

5. Applicant's arguments with respect to claims 19-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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